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Religiosity and depression in older people: Evidence from underprivileged refugee and non-refugee communities in Lebanon

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Abstract

Religiosity is an important aspect of the life of older people, particularly in the Arab region where religiosity is an important part of daily social and political life. Studies have documented the relationship between religiosity and depression among older people, but none in the region. A total of 740 persons aged 60 + were interviewed in three poor urban areas of Lebanon, one of which was a Palestinian refugee camp. The questionnaire included five items on religiosity covering organizational and intrinsic religiosity. Depression was assessed using the 15-item Geriatric Depression Score (GDS-15). Depression was prevalent in 24% of the older persons interviewed with the highest proportion being from the Palestinian refugee camp (31%). Results suggest that only organizational religiosity was related to depression and this pattern was only significant among the refugee population. Religious practice is discussed as an indicator of social solidarity rather than an aspect of religiosity. Minority groups may rely on religious stratagems to cope with their distress more than other groups.

Introduction

The growing body of research linking religion and spirituality to health outcomes comes mostly from the West, with little empirical evidence on Arab population in the Middle East Region (Al kandari, 2003). Spirituality and religion affect health and illness in different ways and different aspects of religiosity affect mental health differently. Praying, for instance, may hasten recovery and positively influence healthcare decisions, and religious devotion is associated with greater life satisfaction, improved psychological health and lower incidence of psychiatric disorders (Gleen, 1997). A meta-analysis of 34 recent studies conducted between 1999 and 2002 revealed that personal devotion (subjective religious orientation) produces the strongest correlation with positive psychological functioning (happiness, life satisfaction) and that institutional religiosity (organizational religious orientation such as participation at church/mosque activities) creates the weakest correlation (Hackney & Snaders, 2003). More recent studies suggest a salutary effect of religion on mental health, with organizational religiosity having the highest impact (Parker et al., 2003). Sloan, Bagiella and Powell (1999) argue that the association between spirituality and health is incoherent even in good studies and that advocating the good effect of religiosity on health raises many ethical questions.

Religiosity seems to be particularly important among older adults where they are often both spiritual and active participants in organized religion (Isaia, Parker, & Murrow, 1999). On

the other hand, older age is established as a major predictor for depression with 45.2% of women and 26.9% of men afflicted by age 70 (Gottfries & Karlsson, 2005). A Medline search revealed around 15 studies, all conducted in non-Arab countries, dealing with the relation between religiosity and depression in older people. Among these studies, many have documented the positive effect of religiosity on prevalence of depression in older people (Fehring, Miller, & Shaw, 1997; Parker et al., 2003), depression remission (Beekman, Deeg, Braam, Smit, & van Tilburg, 1997; Koenig, George, & Peterson, 1998a); even joy (Consedine, Magai, & King, 2004), and physical well-being (Krause et al., 2002). However, the literature is not definitive regarding this issue, as some studies suggest that certain aspects of religiosity such as participation in religious activities have no effect on older people's depression (Boey, 2003b; Robison et al., 2003). Thus, there is a need to further explore the relationship between religiosity with depression in older people. This issue is particularly relevant in the East Mediterranean region (EMR) where religion and spirituality play an important part of daily social and political life.

Lebanon is one of the smallest countries of the EMR and has a total population of about four million inhabitants who belong to 16 different religious affiliations. Religion in Lebanon governs many aspects of the social and political life. Key positions in the state must be filled, by constitution, by people belonging to specific religious sects. Adding to Lebanon's cultural uniqueness is the fact that, unlike all EMR countries, Christians constitute almost 30% of its population, and are considered an essential group within the Lebanese society. The need for research on the health and well-being of older people in Lebanon and the region is accentuated by the global phenomenon of population ageing. The proportion of Lebanese older individuals, which did not exceed 7% in 1995, is projected to reach 10% by the year 2025 (Sibai, Sen, Baydoun, & Saxena, 2004b). The current study looks at the association of religiosity with older people depression in three suburban underprivileged communities in Beirut, one of which is solely inhabited by Palestinian refugees. This study is especially important because it focuses on poor communities, where treating depression may be more challenging than in affluent areas. The aims of the present research work are to: (a) determine the prevalence of depression among older persons residing in underprivileged communities in Lebanon; and (b) to examine the association between different dimensions of religiosity and depression in older people in such a setting, controlling for other demographic, psychosocial variables, and health related variables.

Methods

Sample

Data used in this paper were part of a large Urban Health Study conducted by a multidisciplinary team of researchers in the Faculty of Health Sciences at the American University of Beirut in three suburban underprivileged communities in Beirut, the capital of Lebanon. The three communities' studied were Burj Barajneh Palestinian refugee camp (BBC), Nabaa, and Hay El Sellom.

The study was undertaken in two phases. In phase I (May to July 2002), 3300 households were sampled using a stratified two stage design. Data were collected using a household questionnaire that provided information about demographics, socio-economics, general health and insurance coverage. This phase identified 969 older persons aged 60 and above. Out of the 969 elderly, 116 were either dead or had moved away before the second phase of data collection. This left 853 elderly, however 39 refused to participate, 44 for which we had no clear contact information, and 30 who provided irrelevant data (due to cognitive impairment or other reasons). Thus the final sample size was 740 persons aged 60 years and above. The total response rate was 86.7%. The respondents were similar to 'non respondents' with respect to age, gender, and work status.

The study was approved by the Institutional Review Board, which did not require the authors to have a signed consent form. However, verbal consent was taken from the elderly prior to conducting the interview. Consenting elderly were interviewed using a structured lengthy questionnaire comprising 600 culturally appropriate questions (mostly closed-ended) with many filtering questions.

The three communities

Residents of the Burj Barajneh camp are Palestinian refugees who originally came from Palestinian villages in waves since 1948 and settled in neighbourhoods in Lebanon. With a population size of around 14000–18000 in an area of 1.6 square kilometres, the camp is densely populated. Poor environmental conditions prevail in the camp and these may be partially attributed to the legal and political restrictions imposed on the Palestinian refugees. All the inhabitants of the Burj Barajneh camp are Muslims.

Nabaa is a densely populated neighbourhood in the Eastern suburbs of Beirut. Its population is estimated to be around 9000–12000 covering an area of three square kilometres. This community is ethnically diverse and overcrowded. Shiite Muslims came into the community before 1975 together with Armenians, but Muslim residents were displaced during the civil war (after 1975) and replaced by Christians from Mount Lebanon. Respondents from Nabaa were 83% Christian and 17% Muslims. There are several NGOS and volunteer agencies serving the area. But the funds are limited and living conditions are harsh.

Hay El Sellom is part of the Southern suburbs of Beirut and is situated southeast of Beirut International Airport. It contains 100,000–120,000 inhabitants who are Shiites except for Hay el Habariyi, which mostly consist of Sunni Muslim families. This community came into existence following the Lebanese civil war. The area developed due to lack of work opportunities in rural areas in East Lebanon and the war front in Southern Lebanon. The dominant political party is Hizbullah who are taking special care to provide education and social services (Makhoul, 2003). Respondents from Hay El Sellom were all Muslims.

Measures

Religiosity was assessed by six items tapping three concepts: organizational, non-organizational and subjective. (1) Organizational religiosity was assessed in the current study by asking about the ‘frequency of attending religious services (church or mosque)’ (always, most of the time, never) categorized as regular or irregular. Non-organizational included two variables: praying and fasting. The ‘frequency of praying’ (never, once per year, several times per year, once per month, once per week, several times per week, almost every day, several times per day), was dichotomized as (frequent versus non-frequent) whereby frequent Muslim prayers were those who prayed several times per day and frequent Christian prayers were those who prayed once per week or more. This dichotomization is culturally sensitive and addresses religious differences between Christians and Muslims in our sample. The variable ‘fasting during fasting days’ was measured as yes versus no. (2) Subjective religiosity reflects personal and internalized devotion and was measured on a three-point Likert type scale as self reported strength of being religious and the extent to which religious belief influences the ways of life. The subjective religiosity variable was recoded into two categories: very religious and religious/average (Table II). Dichotomizations were done mainly because of the small number of observations in some categories.

Depression

Depression, the main outcome variable was assessed using the 15-item Geriatric Depression Scale (GDS). The GDS consists of 15 short questions inquiring about depression symptoms

(yes/no) where a score of less than five indicated the absence of depression, a score of 5–10 indicated probable depression and a score of more than 10 indicates definite depression (Allen et al., 1994). The GDS has good psychometric properties (Fountoulakis et al., 1999; Sheikh & Yesavage, 1986) with a sensitivity of 92.23% and a specificity of 95.24%. The Arabic version of the GDS-15 used for the present study has not been validated but correlated well with the Arabic validated General Health Questionnaire (GHQ-12), that measures psychological distress. The authors of this paper are currently validating the GDS.

Socio-demographic variables

These included gender, age categorized into 69 years or younger, 70–79 years and 80 years or older; religious affiliation (Muslim versus Christian), ethnicity (Lebanese versus Palestinian). Marital status was represented as currently married and currently not married (single, divorced, separated, or widowed). Education was measured as literate versus illiterate; perception of income sufficiency originally assessed on a four-point scale was dichotomized into insufficient and sufficient income due to the small sample size.

Psychosocial variables

Social support was assessed by several questions such as the availability of support for specific problems (financial, physical...). However only one variable, 'the presence of someone who can help in case of any personal problems (yes/no)' was included in the analysis due to high collinearity between all the support variables. Stressful life events were measured by asking about the occurrence of 17 normative life events in the year preceding the interview (divorce, illness, death, domestic violence, financial loss ...) and then categorized into four main themes: personal loss, financial problems, illness, and family problems. The four categories were coded as dichotomous variables (yes/no). Again 'illness' was only included in the analysis due to high collinearity with the other variables.

Health variables

Health variables were represented by the presence of chronic disease (yes/no) and by the older people's ability to perform activities inside the house (yes/no).

Data analysis

Analysis of the data was performed using SPSS 12.0 for Windows. Bivariate analyses were performed and, since all the variables were categorical, only the Chi square test was used for bivariate analysis. Chi Square was used to test for the association between presence of definite depression and religiosity on one hand and selected socio-demographic and health factors on the other. Logistic regression models were performed to assess the independent association of religiosity with depression stratified by community, as the communities were very different ethnically and with respect to most social, economic and health indicators. Variables were entered into the logistic level following the enter method. The level of significance used in bivariate analyses was 0.05. No collinearity existed between the independent variables. Only significant variables from the bivariate analyses were included in the model as independent variables and where the dependent variable was presence versus absence of definite depression. In the final model for Nabaa, religion was included. No multivariate analysis was performed on Hay El Sellom since the sample size was too small and therefore the power of detecting differences was very low, in addition to finding no significant results at the bivariate level in this particular area. All results were weighted according to the distribution of the older people in the three communities.

Results

Baseline characteristics

The current study included 740 respondents aged 60 years and above, with a mean age of 68 years and a standard deviation of 6.6 years. Table I shows the percentage distribution of the respondents by selected characteristics across the three communities. There were more females in the sample, and a larger proportion of older people in the 60–69 age groups with high illiteracy rate, and more than half reporting insufficiency of income. Over one third of the total study sample reported difficulty in performing activities inside the house. Literacy, perceived household income, and difficulty in performing inside house activities showed a significant difference among surveyed communities. One-in-four older people had definite depression, with the Palestinian refugees having the highest proportion (31%) followed by Nabaa (21%), and then Hay El Sellom (12%).

Religiosity indicators

Table II shows the percentage distribution of older persons according to the religiosity indicators across the three communities, and gender. The three communities differed significantly in organizational, non-organizational and the subjective aspects of religiosity. Older people in the Nabaa area, containing both Christian and Moslem, were more likely to attend religious activities regularly, to pray frequently and to report being very religious. Gender was significantly related to all the religiosity indicators, where females reported being more involved in prayers, fasting and being more religious than males, while males reported a higher regular attendance of religious activities than females.

Association between religiosity and depression

Table III shows the percentage of older people suffering from definite depression in the three communities by different indicators of religiosity and other psychosocial factors. Attending religious activities showed a significant relation with depression among Palestinian refugees. Sixteen percent of those who regularly attended religious activities were depressed compared to 39% of those who did not attend regularly. Self-reported strength of being religious showed a significant relation with depression in Nabaa. Seventeen percent of those who stated they were very religious suffered from depression compared to 25% of those who were religious/average, and 23% of those who were non-religious.

Results of the two logistic regression analyses performed for the two Lebanese and non-Lebanese groups are shown in Table IV. Controlling for demographic, health and psychosocial variables, the odds of being depressed were significantly lower for older Palestinian refugees who had a regular attendance of religious activities (OR = 0.41; 95% CI: 0.18–0.97). After adjustment, religiosity was not significantly related to depression in Nabaa.

Discussion

This is the first study to address quantitatively the issue of religiosity and its effect on mental health in the region. The level of depression among the surveyed populations was higher than those reported in the region and the West (Abolfotouh, Daffallah, Khan, Khattab, & Abdulmoneim, 2001; Madianos, Gournas, & Stefanis, 1992; Unutzer, Patrick, Marmon, Simon, & Katon, 2002). Depression was associated with religious practice but only among the Palestinian refugees, who also reported the highest level of depression in the three communities. This pattern is similar to a study by Dunlop, Song, Lyons, Manheim and Chang, (2003) in the USA who found that older peoples' depression rates differed across different racial and ethnic groups with Hispanics (10.8%) and African-American (9%) being

higher than whites (8%). In addition to the difficulties caused by their poor socio-economic status, Palestinian refugees are, in general, affected by stress resulting from instability, and uncertain futures. The living conditions of the Palestinian refugees residing in camps in Lebanon are the most disadvantaged in the Middle East (Parsons, 1997; Sayigh, 1995).

Older people in the Palestinian camp who regularly attended the mosque to pray on Friday were less likely to be depressed than those who did not attend. Religiosity in its three aspects was not related to depression in the two other communities composed of Muslim and Christian Lebanese citizens from two poor underprivileged areas in the capital. Frequent religious attendance was associated with an increased survival in a community cohort of elderly (Bagiella, Hong, & Sloan, 2005). Religious attendance (or what some refer to as organizational religiosity) does not seem to have a consistent strong association with mental health (Boey, 2003a; Koenig, George, & Peterson, 1998b). There is evidence of a negative association between religious attendance and mortality (all causes). The association between mosque attendance and decreased depression can be explained in a number of ways. First, going to the mosque is possibly a way to socialize, and to socially engage with other people who have the same social background and more or less the same ideas and worries. One possible mechanism through which religious-service attendance functions is enhancement of social resources, and increasing the size of social networks that ultimately affect mental health (Chatters, 2000). This can be specifically relevant to the refugee population surveyed. Thus, going to the mosque offers a moment of solidarity where Palestinian older people meet and share their fears, hopes and expectations. According to this theory, religiosity has a protective effect not due to the religious practices or beliefs themselves, but rather due to the feeling of belonging to a society, in this case the religious group. Second, it has been suggested that minority groups rely on religious stratagems to cope with their distress more than other groups do (Dunn & Horgas, 2004). This might very well apply to Palestinian refugees in Lebanon since these are a minority, and a poorly integrated group. Indeed they are confined to camps such as the 1.6 square kilometres comprising Burj Barajneh camp, without integration into the general community. This is mainly due to political and social restrictions as they are for example, not allowed to work in over 60 white-collar jobs (Ajial Centre for Statistics and Documentation, 2005). Their feeling of being in a minority would then push them to rely more heavily on religious activities and help them to feel less depressed because they feel closer to God.

The study did not provide evidence of an effect of the two other dimensions of religiosity on depression. First, an overwhelming majority of older people have some religious commitment. Second, the measure of prayer did not distinguish individual and group prayers. Each type might have a different impact on health. Although, the present study highlighted the importance of religious participation, this does not mean however that one should use this finding to advocate religiosity. The issue of religiosity should be handled with extra care in Arab countries like Lebanon, and particularly such is the case here, in Palestinian camps mainly because some groups could misguidedly use the findings to promote their specific ideologies. Other studies need to be conducted to further explore this relationship possibly controlling for other variables such as political affiliation.

The main limitation of the present study is the cross-sectional design, which makes it hard to infer causality whereby practice of prayer could be alleviating depression or people who are less depressed could be more likely to go to mosques. The sample size was also small, which in addition to the loss of power necessitated dichotomization of many variables. Dichotomization, particularly when it comes to religiosity variables, eventually prevents the identification of more composite patterns in the variables' relationships. The use of only one item to assess social support might decrease the reliability of such assessment. Another limitation is the use of a non-validated scale to measure social support and stressful life

events. Furthermore, although GDS-15 has been validated in many settings, none of these included an Arabic setting, which adds another limitation to the current study. However, the currently used Arabic GDS-15 correlates well with the validated GHQ-12 distress-measuring instrument.

Conclusion

There has been hardly any research on the health of older people in the region especially on the issue of mental health. It was only in 2001 that mental health was put among the priority health problems in the region after the World Health Organisation issued its annual report focusing on the magnitude and burden of mental disorders worldwide. Mental health is arguably the most expensive public health priority worldwide and its personal and societal costs are highest among the world's growing older population. In poor communities where access to healthcare can be a problem, looking for alternative solutions is important. Studies are needed to understand conceptually religiosity among an extremely religious Arab population, which will ultimately explain better the links between religiosity, social support and mental health.

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Table I

Characteristics (%) of the three communities.

	Communities			
	Palestinian	Lebanese		Total (<i>n</i> = 740)
	Burj Barajneh refugee camp (<i>n</i> = 246)	Hay El Sellom (<i>n</i> = 118)	Nabaa (<i>n</i> = 376)	
Male	46	43	44	45
Age				
60–69	65	67	62	64
70–79	29	30	30	30
80 and above	6	3	8	6
Lebanese *	5	100	98	61
Muslim *	100	100	17	61
Currently married	61	62	63	62
Literate *	40	23	49	42
Sufficient income *	54	78	48	46
Depression *	31	12	21	24
ADL problems *	53	21	29	34

ADL, Activities of daily living; weighted percentages have been used;

* *p*-value<0.05.

Table II
Percent distribution of older persons by selected items of religiosity across the three communities, and gender.

	Communities					Gender	
	Palestinian	Lebanese				Female	Male
	Burj Barajneh refugee camp (n = 246)	Hay El Sellom (n = 118)	Nabaa (n = 376)			(n = 412)	(n = 328)
							Total (n = 740)
Frequent praying	90	98	94 [*]			87	98 ^{**}
Regular mosque/church attendance	36	45	87 [*]			77	48 ^{**}
Regular mosque/church attendance	36	45	87 [*]			77	48 ^{**}
Fasting	91	83	48 [*]			66	75 ^{**}
Very religious	24.5	10	42.5 [*]			37	23.5 ^{**}
Religious or average	75.5	90	57.5			63	76.5
Religious beliefs affect daily life	74	58	67 [*]			60	76 ^{**}

Weighted percentages have been used;

^{*} p -value<0.05 for the relationship between communities and the corresponding religiosity indicator;

^{**} p -value<0.05 for the relationship between religious affiliation and the corresponding religiosity indicator.

Table III
Percent with definite depression in the three communities by religiosity indicators, and other psychosocial factors.

	Communities									
	Palestinian					Lebanese				
	Burj Barajneh refugee camp		Hay El Sellom			Nabaa		Total		
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	<i>n</i>	%	<i>n</i>	%	<i>n</i>
RELIGIOSITY INDICATORS										
Frequent praying	217	32	109	11	336	22	662	24		
Non frequent praying	23	21	3	33	20	10	46	18		
Regular mosque/church attendance	85	16*	49	12	308	20	442	18*		
Irregular mosque/church attendance	155	39	63	12	43	22	261	31		
Fasting	219	32	94	11	165	17	478	24		
Very religious	71	32	9	22	150	17*	230	22		
Religious or average	217	30	85	11	204	25	506	25		
Not religious	21	19	18	13	173	23	212	22		
Religious beliefs affect daily life (yes)	178	32	65	9	249	20	492	24		
Religious beliefs affect daily life (no)	62	27	47	15	124	25	233	24		
PSYCHOSOCIAL FACTORS										
Age 60–69	158	30	73	14.5	230	21	461	24		
Age 70–79	68	31	35	3	113	22	216	23		
Age 80+	14	41	4	33	30	9	48	31		
Male	109	22*	47	5	165	16*	321	17*		
Female	131	38	65	17	209	26	405	30		
Muslim	240	69	112	12	64	20	416	25		
Christian	–	–	–	–	310	22	310	22		
Literate	95	19*	26	9	180	17*	301	17*		
Illiterate	145	39	86	12	194	26	425	29		

	Communities									
	Palestinian					Lebanese				
	Burj Barajneh refugee camp					Hay El Sellom				
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	<i>n</i>	%	<i>n</i>	%	Total
Currently married	148	26 [*]	68	10	239	20	455	21 [*]		
Currently not married	92	38	44	14	135	25	271	29		
Sufficient income	128	23 [*]	86	10	176	13 [*]	390	16 [*]		
Insufficient income	112	39	26	18	197	29	335	33		
Difficulty in performing activities inside the house (Yes)	128	41 [*]	26	14	78	49 [*]	232	41 [*]		
Difficulty in performing activities inside the house (No)	112	19	86	11	296	14	494	15		
Has someone who can help in case of any problems (Yes)	171	28	71	13	310	22 [*]	552	23		
Has someone who can help in case of any problems (No)	69	38	41	9	63	20	173	26		
Illness during last year (At least once)	70	47 [*]	20	12	124	32 [*]	214	36 [*]		
Illness during last year (No)	169	24	92	13	249	16	510	19		

Weighted numbers and percentages have been used;

* *P*-value<0.05.

Table IV

Adjusted odds ratios (OR), and 95% Confidence Intervals (CI) for presence of definite depression by selected variables for older persons living in Buij Barajneh camp, and Nabaa.

	Buij Barajneh Palestinian Camp			Nabaa		
	Adjusted OR	95% C.I	p value	Adjusted OR	95% C.I	p value
Age						
80+	1.00			1.00		
60–69	0.72	0.22–2.39	0.710	0.74	0.35–1.53	0.410
70–79	0.59	0.18–2.00	0.496	0.60	0.28–1.29	0.190
Sex						
Females	1.00			1.00		
Males	1.45	0.59–3.56	0.332	0.59	0.38–0.91	0.018
Religious affiliation						
Christians				1.00		
Muslims				1.07	0.70–1.64	0.750
Religiosity						
Religious or average				1.00		
Very religious				0.78	0.52–1.19	0.252
Religious attendance						
Irregular	1.00					
Regular	0.41	0.18–0.97	0.041			
Education						
Illiterate	1.00			1.00		
Literate	0.48	0.22–1.06	0.065	0.72	0.46–1.13	0.149
Marital status						
Currently not married	1.00					
Currently married	0.81	0.43–1.53	0.396			
Income sufficiency						
Insufficient income	1.00			1.00		
Sufficient income	0.42	0.24–0.74	0.003	2.38	1.61–3.51	<0.001
ADL difficulties						
No	1.00			1.00		

	Burj Barajneh Palestinian Camp			Nabaa		
	Adjusted OR	95% C.I	p value	Adjusted OR	95% C.I	p value
Has someone who can help in case of any personal problems						
Yes	2.05	1.10–3.79	0.015	3.08	2.07–4.58	<0.001
No				1.00		
Illness during last year						
Yes				0.95	0.62–1.45	0.810
No	1.00			1.00		
Yes	2.89	1.62–5.15	<0.001	1.88	1.23–2.87	0.004